

Patent Claims

1. An actuating device, in particular for setting at least one actuating element of at least one air vent, and at least one actuating element of at least one air flow control element in at least one air-guiding duct in a housing of a heating or air conditioning unit in a motor vehicle, with an operating unit having at least one operating element, and at least two elements for transmitting movements of the operating element to the actuating elements, characterized in that at least one actuating element of an air vent and at least one actuating element of an air flow control element can be adjusted with the at least one operating element of the operating unit.

2. The actuating device as claimed in claim 1, characterized in that the at least one operating element of the operating unit has at least two setting ranges which are independent of each other.

3. The actuating device as claimed in claim 1 or 2, characterized in that, by changing the position of the at least one operating element, at least one adjusting element of at least one air vent can be actuated in a first setting range and at least one adjusting element of at least one air flow control element can be actuated in a second setting range.

4. The actuating device as claimed in one of the preceding claims, characterized in that the setting of at least one actuating element of at least one air vent in the first setting range of the at least one operating element can be changed in such a manner that, in a first end position, diffuse air can be introduced into a vehicle interior, in intermediate positions a mixture of diffuse and directed air can be introduced

- 12 -

and, in a second end position, directed air or a spot flow can be introduced therein.

5 5. The actuating device as claimed in one of the
preceding claims, characterized in that the setting of
the actuating element of the air flow control element
in the second setting range of the at least one
operating element can be changed in such a manner that,
in a first end position, preferably the windshield of a
10 vehicle can be ventilated, in intermediate positions
the windshield and the foot well of a vehicle can be
ventilated and, in a second end position, preferably
the foot well of a vehicle can be ventilated.

15 6. The actuating device as claimed in one of the
preceding claims, characterized in that the at least
one operating element of the operating unit is a rotary
switch or slide switch.

20 7. The actuating device as claimed in one of the
preceding claims, characterized in that the element for
transmitting movements of the at least one operating
element of the operating unit to at least one actuating
element of at least one air vent and to at least one
25 actuating element of at least one air flow control
element is a Bowden cable or a flexible shaft.

8. The actuating device as claimed in one of the
preceding claims, characterized in that the activation
30 for transmitting movements of the at least one
operating element of the operating unit to at least one
actuating element of at least one air vent and to at
least one actuating element of at least one air flow
control element takes place via at least one cam disk
35 with at least one radial cam, preferably by means of a
cam disk with at least two radial cams or by means of
two cam disks each having at least one radial cam.

- 13 -

9. The actuating device as claimed in one of the preceding claims, characterized in that at least one actuating element of at least one air vent and/or at least one actuating element of at least one air flow control element has at least one electric motor as actuator.

10. The actuating device as claimed in one of the preceding claims, characterized in that the adjustment or setting of the at least one operating element of the operating unit is detected via an electronic position sensor and can be transmitted by means of transmission elements in the form of electric lines to at least one actuator of at least one actuating element of at least one air vent and/or of at least one actuating element of at least one air flow control element.

11. The actuating device as claimed in one of the preceding claims, characterized in that at least two actuators of the actuating elements are combined in a central unit and the actuating elements can be adjusted via Bowden cables or flexible shafts.

12. The actuating device as claimed in one of the preceding claims, characterized in that at least one air vent is designed as a swirl nozzle.

13. A heating or air conditioning unit, in particular for a motor vehicle, characterized in that the heating or air conditioning unit contains at least one actuating device according to one of claims 1 to 12.

14. The heating or air conditioning unit as claimed in claim 13, characterized in that the heating or air conditioning unit comprises at least one of the following components: heat exchanger, heating element, evaporator, filter, temperature mixing flap, mixing

chamber, one or more flow ducts and one or more control flaps for distributing the air to the outlet ducts.